



PATENT

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Deborah A. Peacock, Reg. No. 31,649

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appl. No. : 10/661,319  
Applicant(s) : Robert L. Armstrong, et al.  
Filed : September 12, 2003  
Title : OPTICAL DEVICES AND METHODS EMPLOYING NANOPARTICLES,  
MICROCAVITIES AND SEMICONTINUOUS METAL FILMS  
  
TC/A.U. : 2877  
Examiner :  
  
Docket No. : 37000-9906

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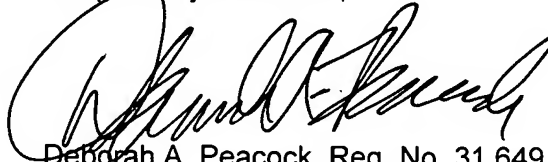
Pursuant to 37 C.F.R. §§ 1.97 and 1.98 and to the duty of disclosure set forth in 37 C.F.R. § 1.56, the Examiner in charge of the above-identified application is requested to consider and make of record the references listed on the PTO 1449 submitted herewith. A copy of each of the listed references is also enclosed.

Although the information submitted herewith may be "material" to the Examiner's consideration of the subject application, this submission is not intended to constitute an admission that such information is "prior references" as to the claimed invention.

In accordance with 37 C.F.R. § 1.97(g), the filing of this Information Disclosure Statement shall not be construed to mean that a search has been made.

This Information Disclosure Statement is being filed within three months of the filing date of the application or prior to the mailing date of a first Office action. Therefore, no fee or certification is required. 37 C.F.R. § 1.97(b).

Respectfully submitted,

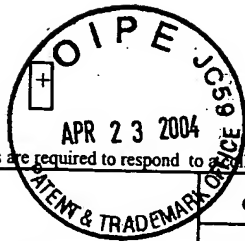
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Deborah A. Peacock, Reg. No. 31,649  
Direct line: (505) 998-1501

Enclosures: PTO Form(s) 1449;  
Copy of Reference(s)

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## INFORMATION DISCLOSURE STATEMENT BY APPLICANT

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### COMPLETE IF KNOWN

Application Number	10/661,319
Filing Date	September 12, 2003
First Named Inventor	ARMSTRONG, et al.
Group Art Unit	2877
Examiner Name	
Attorney Docket Number	37000 CIP2 9906

### U.S. PATENT DOCUMENTS

Examiner Initials	Cite No. <sup>1</sup>	U.S. Patent Document <sup>2</sup>		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number	Kind Code (if known)			
		5,249,195		L.C. Feldman, et al.	09/28/1993	
		5,363,398		A.M. Glass, et al.	11/08/1994	
		5,527,712	A	T.M. Sheeny	06/18/1996	
		4,781,458		S.M. Angel, et al.	11/01/1988	
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		5,237,211		K.T. Carron, et al.	07/05/1994	
		5,405,710		A. Dodabalapur, et al.	04/11/1995	

### FOREIGN PATENT DOCUMENTS

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				Application Number	107661,319
				Filing Date	September 12, 2003
				First Named Inventor	Armstrong, et al.
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		5,405,906		A.W. Olsen, et al.	04/11/1995	
		5,469,018		S.M. Jacobsen, et al.	11/21/1995	
		5,478,658		A. Dodabalapur, et al.	12/26/1995	
		5,616,986		S.M. Jacobsen, et al.	04/01/1997	
		5,674,636		A. Dodabalapur, et al.	10/07/1997	
		5,853,464		I.A. Macpherson, et al.	12/29/1998	
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		5,377,219	A	A.R. Geiger	12/27/1994	
		5,777,776		T. Hiraga, et al.	07/07/1998	
		5,847,816	A	M.S. Zediker, et al (Otaguro)	12/08/1998	
		5,952,655		R.N. Bhargava	09/14/1999	

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		Office <sup>3</sup>	Number <sup>4</sup>	Kind Code <sup>5</sup> (if known)				
		EP	0 527 551	A1	Hitachi, Ltd.	17.02.1994		
		WO	91/20078	A1	BASF Aktiengesellschaft	26.12.1991		
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		V. M. Shalaev, <i>Nonlinear Optics of Random Media: Fractal Composites and Metal-Dielectric Films</i> , Springer Tracts in Modern Physics, v.158, Springer, Berlin Heidelberg 2000.	
		A. K. Sarychev and V. M. Shalaev, "Field Distribution, Anderson localization, and optical phenomena in random metal-dielectric films," Chapter in: <i>Optics of Nanostructured Materials</i> , Eds: V.A. Markel and T.F. George, Wiley, 2001.	
		V.M. Shalaev, "Surface-Enhanced Optical Phenomena in Nanostructured Fractal Materials," Chapter in: <i>Handbook of Nanostructured Materials and Nanotechnology</i> , Volume 4: Optical Properties, Edited by H. S. Nalwa, Academic Press, 2000	
		V. M. Shalaev, V. P. Safonov, E.Y. Poliakov, V. A. Markel, and A. K. Sarychev, "Fractal Surface Enhanced Optical Nonlinearities", Chapter 8: <i>Nanostructured Materials: Clusters, Composites, and Thin Films</i> , Eds; V. M. Shalaev and M. Moskovits, ACS Symposium Series v. 679, ACS Books, 1997	
		Local Field Distribution in Random Metal-Dielectric Films; Theory and Experiment, Dentcho A. Genov, Katyatani Seal, Mark A. Nelson, Andrey K. Sarychev, Z. Charles Ying, Vladimir M. Shalaev, <i>Physica B</i> 338, Pages 228-231 (2003)	
		Metal coverage dependence of local optical properties of semicontinuous metal films, K. Seal, M. A. Nelson, Z. C. Ying, D. A. Genov, A. K. Sarychev, and V. M. Shalaev, <i>J. of Modern Optics</i> 49, 2423-2435 (2002).	
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		M. Breit, V. A. Podolskiy, S. Gresillon, G. von Plessen, J. Feldmann, J. C. Rivoal, P. Gadenne, A. K. Sarychev, and Vladimir M. Shalaev, <i>Experimental observation of percolation-enhanced non-linear light scattering</i> , <i>Phys. Rev. B</i> 64, 125106 (2001).	

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		V. A. Podolskiy, A. K. Sarychev, and Vladimir M. Shalaev, Percolation Composites: Localization of Surface Plasmons and Enhanced Optical Nonlinearities, in Photonic Crystals and Light Localization in the 21st Century, 567, ed. by C. M. Soukoulis (Kluwer Academic Publishers, 2001).	
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Sheet	6	of	15	Attorney Docket Number	37000 CIP2 9906

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS			
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		S. I. Bozhevolnyi, V. A. Markel, V. Coello, W. Kim, and V. M. Shalaev, Direct Observation of Localized Excitations on Rough Nanostructured Surfaces, Phys. Rev. B 58, 11441 (1998).	
		V. M. Shalaev, V. A. Markel, E. Y. Poliakov, R. L. Armstrong, V. P. Safonov, A. K. Sarychev, Nonlinear Optical Phenomena in Nanostructured Fractal Materials, J. Nonlinear Optic. Phys. and Materials, v. 7, 131 (1998).	
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		Vladimir M. Shalaev, Mark I. Stockman, and R. Botet, Resonant excitations and nonlinear optics of fractals, Physica A 185, 181 (1992).	
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Sheet 11 of 15

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Sheet	<b>12</b>	of	<b>15</b>	Attorney Docket Number	<b>37000 CIP2 9906</b>

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Examiner Signature		Date Considered	
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EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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